

## Evans, Georgia

From: Dean, Linda  
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Subj ct: Abstract

Georgia,

Here is the English language abstract for the patent you requested. I can obtain the full patent in German if you like, or the US patent listed below in the patent family. Let me know if you would like either of those.:

1/7/1

DIALOG(R) File 351:Derwent WPI  
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WPI Acc No: 1990-219095/199029

**Die-cast powdery mould releasing agent - comprising inorganic lubricant cpd. and organic adhesive cpd.**

Patent Assignee: HANANO CORP (HANA-N); HANANO COMML CO LTD (HANA-N); HANANO COMML CO LT (HANA-N)

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Number of Countries: 007 Number of Patents: 010

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2227022	A	19900718	GB 8918078	A	19890808	199029 B
DE 3917726	A	19900719	DE 3917726	A	19890531	199030
US 5039435	A	19910813	US 89344564	A	19890428	199135
JP 3243242	A	19911030	JP 9044339	A	19900223	199150
GB 2227022	B	19921104	GB 8918078	A	19890808	199245
KR 9204450	B1	19920605	KR 898257	A	19890614	199351
JP 94009730	B2	19940209	JP 8944339	A	19890223	199409
DE 3917726	C2	19940707	DE 3917726	A	19890531	199425
CA 1335315	C	19950418	CA 610922	A	19890911	199523
SG 9591084	A	19951222	SG 9591084	A	19950615	199611

Priority Applications (No Type Date): JP 8944339 A 19890223; JP 897135 A 19890113; JP 9044339 A 19900223

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2227022	B		8	C10M-111/02	
JP 94009730	B2			B22C-003/00	Based on patent JP 3243242
DE 3917726	C2	3		B22C-001/14	
SG 9591084	A				Previous Publ. patent GB 2227022
KR 9204450	B1			B22C-003/00	
CA 1335315	C			B22C-003/00	

Abstract (Basic): GB 2227022 A .

Agent comprises a mixt. of a base material composed of an inorganic cpd. serving as a lubricant in solid form, and an organic cpd. imparting adhesive property to the base material. Either both cpds. are of powdery or granulated form, or the inorganic base material is of powdered and granulated form, and the particles and coated with the organic cpd.. . USE/ADVANTAGE - For use in die-coating works. Due to the powdery or granular form of the base material, it is not highly reactive and scarcely generates gas even if treated during die-casting. It contains no water so that tension between the metal mould surface and the prod. is weak; and water-pollution after casting is not encountered so that worsening of the field environment can be avoided without need for expensive liq.-waste treatment. (13pp Dwg.No.0/0)

Abstract (Equivalent): GB 2227022 B

A die-casting mould releasing agent comprising a granulated or powdery mixture of (i) a lubricant of granulated or powdery form consisting of boron nitride and/or silicon nitride, (ii) an organic

polymer selected from the group consisting of polyethylene, polypropylene, polystyrene, epoxy resin, silicon resin, phenol resin, acrylate resin and alkyd resin, and (iii) a metal soap, wherein the lubricant is coated with the organic polymer and/or the metal soap.

(Dwg.0/0)

Abstract (Equivalent): US 5039435 A

Die-casting mould release agent comprises a granulated or powdery mixt. of boron nitride, silicon nitride, MoS<sub>2</sub>, graphite, mica and metal oxides lubricants; an organic polymer of polyethylene, polypropylene, polystyrene, epoxy-, silicon-, phenol-, acrylate- and/or alkyl resin; and a metal soap. The lubricant is coated with the polymer or the soap.

Pref. the release agent contains 55-99.9 wt.% of lubricant. Soap is pref. carboxylic acid salt of Na, Ca, Ba, Li, K, Mg or Zn.

USE/ADVANTAGE - For spraying onto inside surfaces of moulds in e.g. automobile or electrical equipment mfr. Compsn. is granular rather than liq., so does not become absorbed by moulding or cause liq. pollution.

Derwent Class: A81; H07; M22; P53

International Patent Class (Main): B22C-001/14; B22C-003/00; C10M-111/02

International Patent Class (Additional): B22D-017/20; B29C-033/60;

C10M-111/04

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